

INTERNATIONAL SEARCH REPORT

International Application No
PCT/JP2004/016810

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 F02N11/08 G01P13/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 F02N F02D G01P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category ° | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| A | US 6 354 257 B1 (MARSHALL BRIAN P ET AL) 12 March 2002 (2002-03-12) abstract; figure 2 column 1, lines 36-44 column 2, lines 11-51 column 5, line 37 - column 6, line 38 ----- | 1-9 |
| A | PATENT ABSTRACTS OF JAPAN vol. 1995, no. 09, 31 October 1995 (1995-10-31) & JP 07 158543 A (HONDA MOTOR CO LTD), 20 June 1995 (1995-06-20) abstract ----- | 1,9 |
| A | EP 1 070 964 A (ROBERT BOSCH GMBH) 24 January 2001 (2001-01-24) abstract paragraphs '0025!, '0029! ----- | 2,3,5,6 |
| | | -/- |

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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Date of the actual completion of the international search

3 February 2005

Date of mailing of the international search report

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|----------|--|-----------------------|
| A | US 5 079 945 A (HANSEN ET AL) 14 January 1992 (1992-01-14) abstract column 1, line 1 - line 38 ----- | 2,3 |
| A | PATENT ABSTRACTS OF JAPAN vol. 2003, no. 07, 3 July 2003 (2003-07-03) & JP 2003 083216 A (MORIC CO LTD), 19 March 2003 (2003-03-19) cited in the application abstract ----- | 1,9 |

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP2004/016810

| Patent document cited in search report | Publication date | Patent family member(s) | | Publication date |
|--|------------------|-------------------------|--|--|
| US 6354257 | B1 | 12-03-2002 | AU 8057001 A CA 2418979 A1 EP 1307653 A1 MX PA03001164 A WO 0212721 A1 | 18-02-2002 14-02-2002 07-05-2003 14-10-2003 14-02-2002 |
| JP 07158543 | A | 20-06-1995 | JP 3139593 B2 | 05-03-2001 |
| EP 1070964 | A | 24-01-2001 | DE 19933844 A1 EP 1070964 A2 | 25-01-2001 24-01-2001 |
| US 5079945 | A | 14-01-1992 | NONE | |
| JP 2003083216 | A | 19-03-2003 | NONE | |